Volume 103
Article 04

Statewide Technical Assistance

JOB PERFORMANCE REPORT
PROJECT FW-7-T-2

Subproject I, Job 1: Fisheries Program Coordination and and Supervision
Subproject I, Job 2: Statewide Water Quality
Subproject I, Job No. 3: Water Quantity Investigation
Subproject I, Job No. 4: Fish and Wildlife Mitigation
Subproject II, Job No. 1: Panhandle Region Technical Assistance
Subproject II, Job No. 2: Clearwater Region Technical Assistance
Subproject II, Job No. 3: Southwest Region Technical Assistance
Subproject II, Job No. 4: Magic Valley Technical Assistance
Subproject II, Job No. 5: Southeast Regional Technical Assistance
Subproject II, Job No. 6: Upper Snake Regional Technical Assistance

PERIOD COVERED: July 1, 1994 to June 30 1995

BY

Will Reid, Fisheries Program Coordinator
John T. Heimer, Staff Fishery Biologist
Cindy Robertson, Staff Fishery Biologist
Michele Beucler, Wildlife Mitigation Specialist
Charles E. (Chip) Corsi, Environmental Staff Biologist
Gregg Servheen, Environmental Staff Biologist
Scott A. Grunder, Environmental Staff Biologist
David E. Parrish, Environmental Staff Biologist
Jim Lukens, Environmental Staff Biologist
Bob Martin, Environmental Staff Biologist

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF TABLES

LIST OF TABLES

LIST OF TABLES

LIST OF APPENDICES

LIST OF APPENDICES

LIST OF TABLES

Subproject II. Job No. 6. Upper Snake Regional Technical Assistance

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Statewide Supervision and Coordination

Subproject: I

Job No.: 1

Period Covered: July 1. 1994 to June 30, 1996

ABSTRACT

During the contract period, two major efforts occupied the majority of my time: conservation of bull trout and relicensing of Idaho Power Company hydroelectric dams on the Snake River.

Author:

Will Reid
Fishery Program Coordinator

OBJECTIVES

To supervise and coordinate the Idaho Department of Fish and Game (IDFG) policy regarding water quality, water quantity, aquatic habitat alterations, hydropower licensing, and conservation of aquatic habitats.

To appraise and provide technical assistance to the executive and legislative branches of state government in matters relating to aquatic environments.

METHODS

IDFG personnel reviewed proposals to construct or modify hydroelectric facilities throughout the state of Idaho. We recommended to the Federal Energy Regulatory Commission (FERC) measures that will protect fish and wildlife habitat. We reviewed and offered habitat protection measures to other federal and state agencies, and private interests on activities that might impact fish habitat. We coordinated with other agencies in the development of standardized management practices which will protect fish and wildlife habitat.

We participated with other agencies in the development of statewide conservation strategies for sensitive aquatic species and their habitats, and we coordinated with regional personnel to ensure compliance and consistency with IDFG policy regarding habitat protection and mitigation.

RESULTS

Federal Energy Regulatory Commission

A considerable amount of time and effort were devoted to the relicensing of Idaho Power Company (IPC) hydroelectric projects on the Snake River. At Upper Salmon Falls (FERC No. 2777), Lower Salmon Falls (FERC No. 2061), and Bliss (FERC No. 1975), the IPC has completed studies, submitted a draft plan with project mitigation and enhancement measures, and submitted to the FERC a final application for license. We have also cooperated with IPC to develop a study plan which should lead to mitigation

and enhancement measures at C.J. Strike (FERC No. 2055) and Shoshone Falls (FERC No. 2778) hydroelectric projects.

Conservation Planning

During the report period, a great deal of energy has been directed towards developing and implementation of a "State of Idaho Bull Trout Conservation Plan" that could be signed by the Governor. The Governor's plan would use the biology the conservation strategy approved by the Idaho Fish and Game Commission in January 1994. The Governor's plan would implement bull trout conservation through the state authority to implement the federal Clean Water Act. The state of Idaho has legislated that the Clean Water Act be enacted in Idaho on a watershed basis by citizen advisory groups. The citizen advisory groups consist of Basin Area Groups (BAGs), Watershed Advisory Groups (WAGs), and technical assistance teams assigned from agencies, industries, and conservation groups with appropriate technical expertise. WAGs will recommend measures to protect water quality and bull trout habitat to the BAGs who will then pass on the recommendations to the administrator at the Division of Environmental Quality and the agency heads responsible for land and wildlife management.

In the Governor's bull trout conservation plan, the state has identified 59 key watersheds important for the conservation of bull trout in Idaho. Those 59 key watersheds cover the range of bull trout in Idaho. Each key watershed will contain sub-watersheds which will be prioritized for protection and restoration needs.

Three principles guide the Governor's plan for bull trout conservation in Idaho:

Meta-population Biology: The long-term survival of bull trout will depend on the ability of any key watershed to provide habitat of a quality and quantity that will support several sub-populations with sufficient numbers to maintain existing populations and recover populations in a depressed condition.

Conservation Biology: Identification and classification of habitats within each key watershed is necessary. Protecting those habitats currently supporting self-sustaining populations of bull trout and designing restoration measures will realize the greatest gain from the least amount of energy and capital expenditure.

Idaho Code 39-360: Idaho Code 39-360 implements the federal Clean Water Act in Idaho. The code provides that BAGs for broad watersheds will designate citizen

watershed advisory groups that will design management practices to improve or maintain water quality (bull trout habitat) within each of the 59 key bull trout watersheds.

In conjunction with the state efforts to draft a bull trout conservation strategy, I have also coordinated with the U.S. Forest Service and the U.S. Bureau of Land Management through the Upper Columbia EIS team to identify a strategy for protection of all inland native fish and public administered lands. The federal native fish strategy is similar to the state bull trout conservation strategy but contains more prescriptive language.

At the time this report is being sent for printing, neither the state bull trout conservation plan nor the federal native fish strategy has been released for implementation. The state bull trout conservation strategy could provide the format for conservation plans other than bull trout. The eventual goal will be to develop watershed plans that will not be species specific.

Forest Practices

During the study period, we continued to cooperate with the Idaho Department of Lands in the development of management practices for the forest industry that will protect water quality during timber harvest activities. During the study period, we obtained final approval for the increase in the class H stream protection zone from 5 to 30 feet. Other on-going actions include a review of the state clean water provisions and how they should be implemented, culvert sizing rule, and leaving tree requirements for shade and large organic debris recruitment to the stream.

Recreational Mining

We coordinated with the Idaho Department of Water Resources in the modification or the short-form stream alteration permit used by recreation miners. The list contains a number of streams that are closed, either seasonally or permanently, to recreational mining because of threats to spawning or rearing fish.

Watershed Management

We have, coordinated efforts with other state and federal agencies to develop and implement citizen participation in watershed planning.

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Statewide Water Quality

Subproject: I

Job No.: 2

Period Covered: July 1, 1994 to June 30, 1996

ABSTRACT

During the project year, I was involved with a number of different agencies and organizations in an effort to maintain habitat for aquatic resources. Most of the involvement took place at meetings and on field tours. I made comments on hydropower, agricultural, mining, and timber activities.

Author:

John T. Heimer Fishery
Staff Biologist

OBJECTIVES

To provide technical assistance to agencies on activities that may impact Idaho's water quality as it relates to fish habitat and aquatic populations.

RESULTS

The water quality coordinator is the Idaho Department of Fish and Game's (IDFG) representative on a number of different committees or work groups dealing with water, habitat issues, and hydropower production. These include, but are not limited to, the following activities:

Hydropower Activities

The status of 47 different hydropower projects in Idaho was changed by the Federal Energy Regulatory Commission (FERC) in 1995. Twenty-two of these changes were license amendments which were granted by FERC. We reviewed and made comments on all the proposed status changes. These three new hydroelectric projects came on line in 1995: Twin Falls, Horseshoe Bend, and Forgy.

The Washington Water Power Company started the first stage consultation process for relicensing of their Cabinet Gorge and Noxon projects in 1995. In the late fall they held public scoping meetings on these proposals. We reviewed and made comments on their consultation documents from the standpoint of needed studies to assess possible mitigation measures.

In 1995, PacifiCorp started the first stage consultation process for relicensing of four hydropower projects on the Bear River. The projects are Soda, Grace, Cove, and Oneida. We had numerous meetings with them regarding the relicensing process, needed studies, and possible mitigation measures. Public scoping meetings for this process were scheduled in May 1995.

I reviewed and made comments on a number of proposed hydropower projects, most of them being fairly small from the standpoint of hydropower production. I also attended

five hydropower inspections conducted by FERC. I also looked at and discussed the operations of a number of hydropower projects with regional personnel during the year.

Interagency Tours

I attended two interagency tours in 1995. Both were geared towards looking at forest water quality problem areas as a result of timber harvest operations.

Nonpoint Source Workshop and Snake River Symposium

I attended a Nonpoint Source Workshop and a Snake River Symposium in 1995. Both were designed towards solving water quality problems.

Cumulative Watershed Analysis

While working as part of an interagency task force, we completed a cumulative watershed analysis procedure to assess timber harvest on watershed conditions. Specifically, the procedure was developed to evaluate the condition of different small watersheds in a larger drainage area.

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Water Quantity Investigations

Subproject: I

Job No.: . .3

Period Covered: July 1, 1994 to June 30, 1995

ABSTRACT

During the project year Idaho Department of Fish and Game (IDFG) personnel participated in proceedings for instream flow applications for several river segments in northern Idaho and two springs in the Hagerman area. Public hearings were held for three segments of the Clearwater River, the lower Priest River, and for Briggs and Banbury springs. Additionally, IDFG personnel continued collecting flow and temperature data on the Bruneau and Jarbidge rivers in Owyhee County.

IDFG continues to participate in the Snake River Basin Adjudication (SRBA) that commenced in 1987. The Idaho Supreme Court (Court) ruled on the constitutionality of the 1994 revision of the adjudication statutes. It held that the majority of the revisions were constitutional. The Court also heard arguments on the "amnesty" statutes but has not issued a decision to date. IDFG is nearing resolution of a contested water right claim on the Hagerman Wildlife Management Area (WMA) and expects to have the matter resolved by August 1996. Personnel also are participating with the Idaho Attorney General's Office in negotiations regarding the federal and tribal instream flow claims. The appropriate methods for determining instream flow needs for fish habitat and channel maintenance are the issues currently being negotiated.

Author:

Cindy Robertson
Fishery Staff Biologist

OBJECTIVES

To provide recommendations for instream flows for selected streams statewide, to coordinate IDFG participation in the SRBA, and to solicit and prepare IDFG comments on statewide water quantity issues that may impact fish and wildlife species and aquatic habitat.

RESULTS

Instream Flow Program

Northern Idaho Rivers

The Idaho Department of Water Resources (IDWR) held public hearings in October 1995 to receive testimony regarding instream flow requests for the Clearwater River from the North Fork Clearwater River to the confluence with the Snake River (three applications) and the Priest River from the East River to the mouth. IDFG personnel provided testimony in support of all the requested instream flows.

The applications for the Clearwater River have been held in abeyance at the request of the Idaho Attorney General's Office pending negotiations with the Nez Perce Tribe over water right claims in the Clearwater River. Negotiations are continuing, and it is not known when the applications will go forward for a decision.

The application for the Priest River was denied by IDWR on the basis that it was not in the public interest (i.e., the local public did not support the application). Additionally, IDWR determined that the requested flow was not capable of being maintained during August and September, and thus did not meet another of the criteria for approving instream flow water rights.

Briggs and Banbury Springs

Applications for instream flows for Briggs and Banbury springs were originally filed in September 1978, and a hearing was conducted in April 1979. IDWR withheld action on the applications pending the disposition of prior applications to appropriate water from the two springs for fish propagation. Three of the prior applications were developed, and one was relinquished. A second public hearing was conducted in August 1995, and the applications were approved in October 1995. The Banbury Springs instream flow was subsequently subordinated to a junior, commercial water right prior to approval by the Idaho Legislature.

Bruneau and Jarbidge Rivers

Data collection to determine the influence of river flows on water temperatures in the Bruneau and Jarbidge rivers was initiated in 1994. IDFG personnel collected temperature and flow data on the Bruneau and Jarbidge rivers during 1995 to supplement data collected in 1994. High river flows and other field work prevented putting temperature monitors out until late August; thus, no data are available for the months of June and July 1995. River flows were higher in the Bruneau River during 1995 than in 1994 (Table 1). Daily average and maximum water temperatures in the Bruneau River near Indian Hot Springs ranged from 6.5°C to 18.9°C and 8.2°C and 21.9°C, respectively (Figure 1). Temperatures in the Jarbidge River near Indian Hot Springs were typically 3 to 7 degrees lower than in the Bruneau River (Figure 2). Daily maximum temperatures in the Jarbidge River near Murphy Hot Springs were generally lower in 1995 than in 1994 (Table 2) and did not exceed 22°C during the late summer and early fall months (Figure 3). Similar results were observed on the Bruneau River at the Hot Spring gauge (Figure 4). Daily minimum water temperatures were equivocal in 1994 and 1995. Additional flow data will be collected during 1996.

Snake River Basin Adjudication

IDFG continues to participate in the SRBA that commenced in 1987. In 1994, the SRBA Court ruled that most of the 1994 legislative amendments to the adjudication statutes were unconstitutional because they violated separation of powers between the legislative and judicial branches. The decision was appealed to the Idaho Supreme

Court, and in June 1995, the Idaho Supreme Court found most of the 1994 amendments were constitutional. A petition for rehearing was filed in July 1995 and subsequently denied in August 1995.

Constitutionality of the "amnesty" statutes (statutes that allows expansion of water rights, unrecorded transfers of use, etc.) was upheld by the SRBA Court in 1994 but also was subsequently appealed to the Idaho Supreme Court. The Idaho Supreme Court heard arguments on appeal in January 1996 but has not yet issued a ruling.

Table 1. Flow (cfs) recorded at the Hot Springs gauge, Bruneau, ID, during June to October 1994 and June to September 1995.

DAY	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER	
	94	95	94	95	94	95	94	95	94	95'
1	713	1630	122	1160	54	220	35	95	52	
2	678	1720	114	1120	54	203	35	95	68	
3	642	1900	109	1090	55	188	35	93	69	
4	614	2950	107	1070	55	177	35	96	59	
5	583	2810	103	1020	55	168	34	170	59	
6	522	2480	98	958	47	162	34	117	60	
7	488	2120	96	935	44	158	34	102	77	
8	445	1850	94	928'	43	151	36	96	69	
9	403	2090	89	907	42	148	35	94	65	
10	364	2200	84	892	41	145	33	94	61	
11	351	2030	79	882	41	140	32	92	59	
12	354	1980	73	830	41	133	32	91	58	
13	352	2080	70	750	49	130	33	89	57	
14	348	2110	68	667	54	124	34	86	59	
15	336	2010	64	598	50	124	38	86	61	
16	313	1890	62	556	48	121	39	85	72	
17	290	1800	61	524	44	116	39	84	71	
18	274	1730	57	490	42	111	41	82	70	
19	255	1690	57	463	41	110	42	83	67	
20	247	1510	57	440	41	110	41	83	66	
21	229	1400	56	426	40	110	41	82	65	
22	211	1300	56	403	38	109	41	82	63	
23	195	1190	56	388	38	108	41	83	61	
24	174	1140	57	370	38	108	41	82	61	
25	163	1200	57	356	38	111	41	84	61	
26	154	1290	56	336	39	113	41	84	61	
27	145	1340	56	304	37	111	40	84	61	
28	144	1440	55	278	37	106	39	84	60	
29	138	1400	56	259	36	102	39	84	60	

DAY	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER	
	94	95	94	95	94	95	94	95	94	95*
30	129	1260	56	244	35	100	40	84	62	
31	--	--	55	236	35	95	--	--	64	

*95 DATA NOT AVAILABLE.

Table 2. Daily maximum temperatures (°C) in the Jarbidge River near Murphy Hot Springs for maximum 1994 water and 1995.

	MAX. TEMP.			-	MAX. TEMP.	
DATE	**1994**	**1995**		**DATE**	**1994**	**1995**
8/17	22.3	17.0		9/16	16.6	17.8
	22.3	17.7			16.3	16.7
	21.9	18.0			ND*	17.5
	21.4	18.0			ND	17.3
	22.3	**18.6**			ND	16.2
	20.6	17.5			ND	14.2
	21.4	**18.8**			ND	14.0
8/24	21.3	19.7		9/23	ND	13.4
	21.3	19.3			ND	14.2
	20.3	20.2			ND	13.1
	20.6	20.1			ND	14.3
	21.6	19.7			ND	14.8
	20.5	**18.8**			**15.8**	14.3
	19.6	19.1			13.9	11.1
8/31	19.8	**19.6**		9/30	12.0	11.7
	17.5	20.7			14.7	13.1
	17.9	17.3			13.6	12.5
	19.0	**19.9**			9.9	10.2
	19.6	18.7			11.7	8.4
	19.8	18.7			**9.9**	9.7
	19.5	**18.6**			11.4	9.8
9/7	20.1	**18.8**		10/7	11.6	10.8
	20.3	17.5			12.0	9.5
	18.5	**16.9**			12.2	10.5
	15.6	18.0			11.7	12.8
	15.5	**18.5**			11.4	12.0
	16.4	**18.5**			10.3	10.0
	13.1	**18.5**			10.0	9.1
9/14	15.1	**18.8**		10/14	8.0	10.3
	16.4	19.0			5.2	11.5
'ND = NO DATA				10/16	7.1	9.4

Other SRBA Court rulings have created considerable controversy during 1996. The SRBA Court ruled that the irrigation season in Idaho is legally defined as the "irrigation season" with no set dates for beginning and ending periods of use. Additionally, the judge ruled that Idaho statutes do not recognize partial forfeiture of a water right. A water right may only be forfeited in its entirety. Both decisions have been challenged and have not yet been resolved.

IDFG is nearing resolution of a contested water right at the Hagerman WMA. The U.S. Fish and Wildlife Service objected to the recommended season of use for several irrigation rights arising from Len Lewis Springs. Hagerman National Fish Hatchery also receives water from Len Lewis Springs. A negotiated settlement is nearing completion and is expected to be completed by August 1996.

IDFG personnel participated in negotiations regarding federal reserve and tribal water right claims with the Idaho Attorney General's Office. Methodologies for determining instream requirements for fish habitat and channel maintenance are the issues currently being discussed.

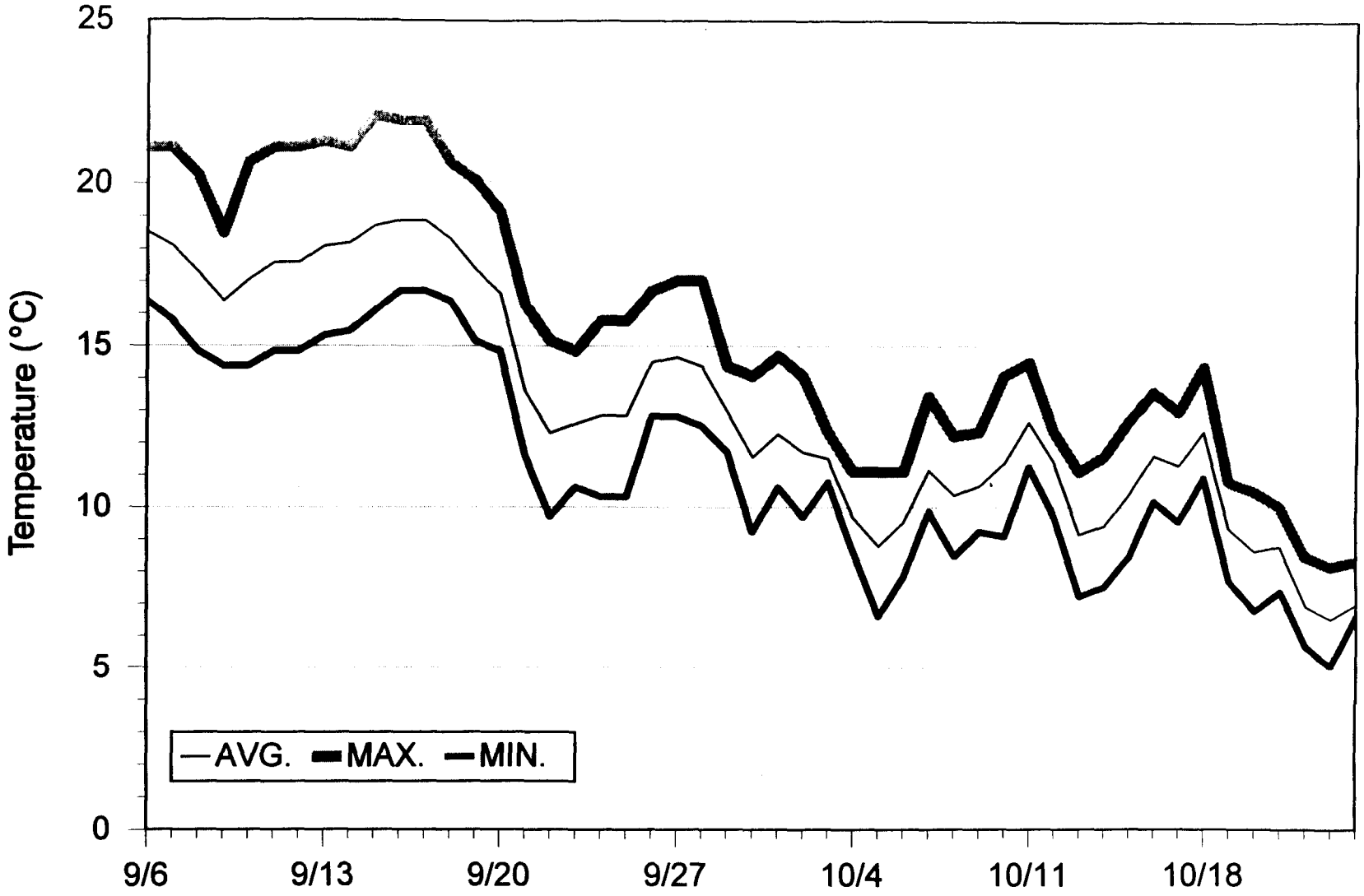

FIGURE 1. Daily average, maximum, and minimum water temperatures (°C) for the Bruneau River at Indian Hot Springs, September and October 1995.

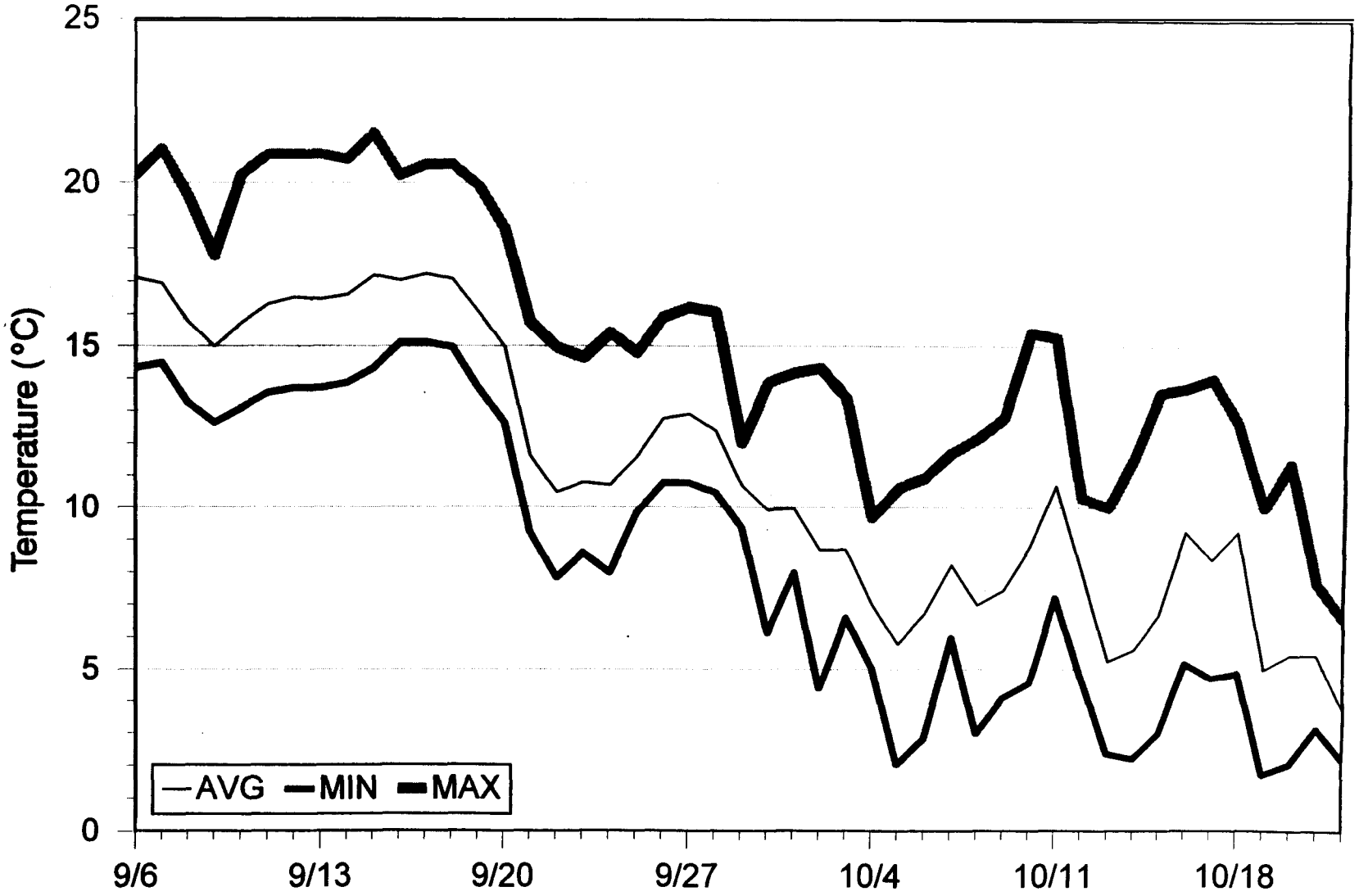

FIGURE 2. Daily average, maximum and minimum water temperatures (°C) for the Jarbidge River at Indian Hot Springs, September and October 1995.

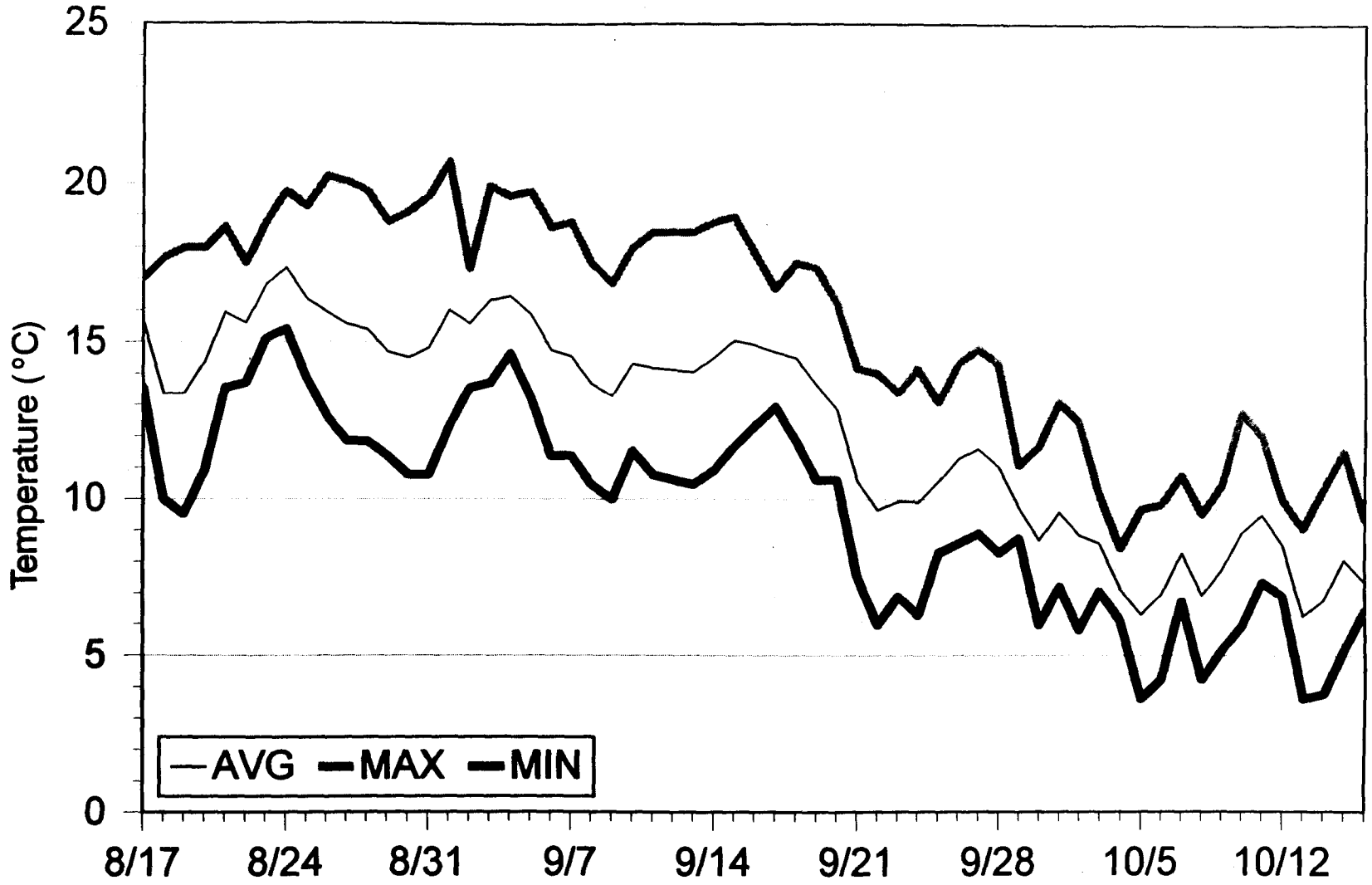

FIGURE 3. Daily average, maximum and minimum water temperatures (°C) for the Jarbidge River at Murphy Hot Springs, August to October 1995.

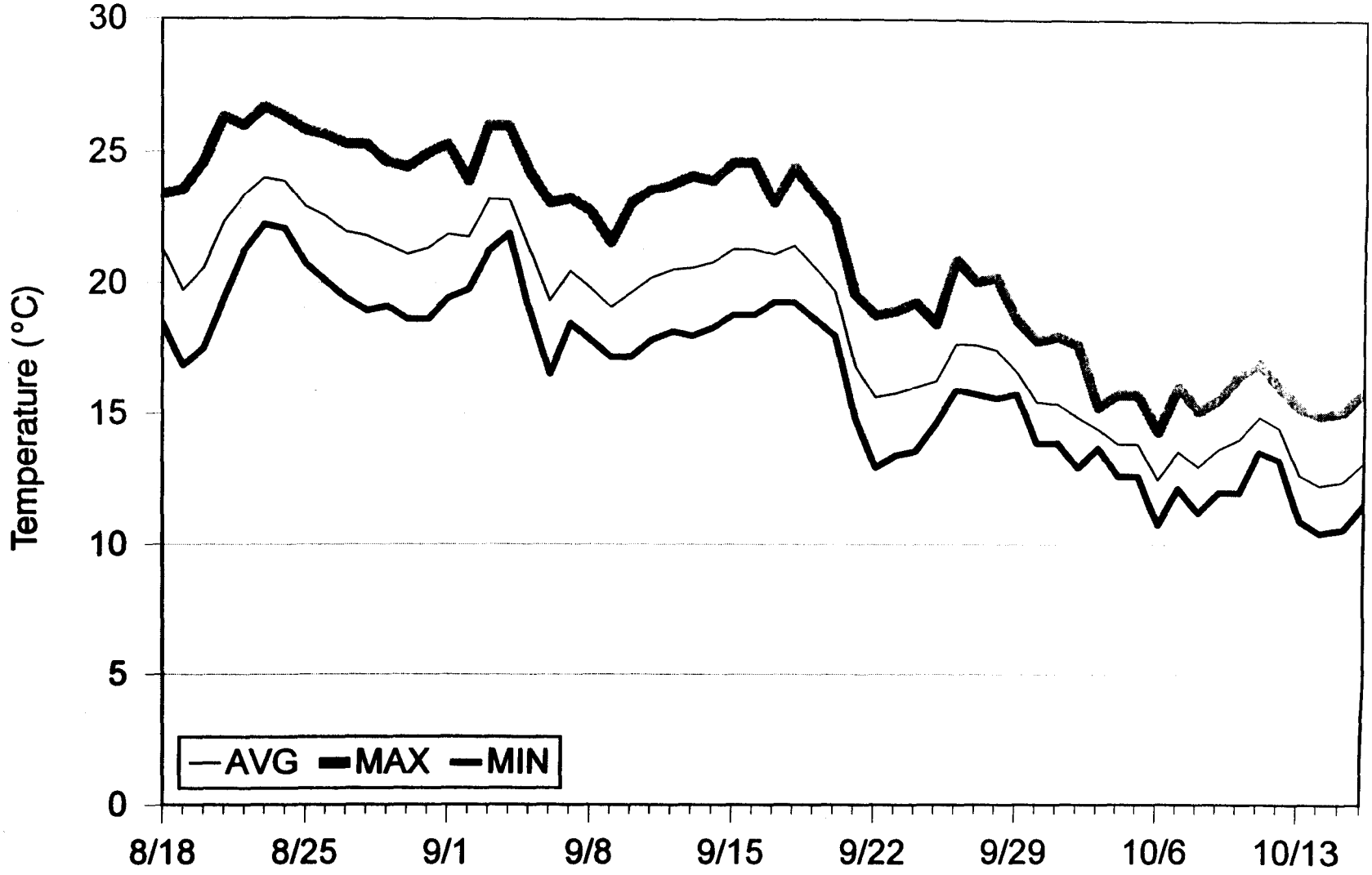

FIGURE 4. Daily average, maximum and minimum water temperatures (° C) for the Bruneau River at the Hot Spring Gauge, August to October 1995.

JOB PERFORMANCE REPORT

State of: Idaho Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2 Title: Fish and Wildlife Mitigation

Subproject: I Job No.: 4

Period Covered: July 1, 1994 to June 30, 1995

ABSTRACT

A literature review of the economic significance of fish and wildlife in Idaho revealed that people spend over $250 million every year on wildlife-based recreation in Idaho. Fish and wildlife significantly contibute to tourism, which is the third largest industry in the state. Gaps in economic information that could contribute to the Idaho Department of Fish and Game's (IDFG) programs were identified. A popular version of the review appeared in IDFG's magazine, *Idaho Wildlife.*

Results of an informal survey, mailed by the Idaho Wildlife Federation and summarized by IDFG Responsive Management staff, provided preliminary insight into non-resident hunters' opinions on in-state wildlife issues. In general, it appeared that non-resident hunters were largely satisfied with their hunting experiences in Idaho, satisfied with current management, and will continue to return despite the high cost of licenses. IDFG responsiveness to both residents and non-residents will be difficult considering those two market segments apparently perceive some wildlife issues very differently.

Author:

Michele Beucler
Wildlife Mitigation Specialist

OBJECTIVES

To monitor the state's demographics, economic trends, and public opinions regarding fish and wildlife so that the human element can be integrated into IDFG regulations, policies, and "way of doing business."

To provide information and technical assistance to staff members regarding surveys, public involvement strategies, and other human dimensions projects.

METHODS

The Idaho Wildlife Federation data summarized new information on non-resident hunters. Additional human dimensions information, including that used for an economic review, was collected through personal contacts, information requests, attending meetings and conferences, and reviewing literature.

Dissemination of information occurred from responding to verbal and written requests, circulating pertinent information to appropriate people, providing material to the IDFG Information and Education Bureau, writing a popular article, and reporting to the Idaho Fish and Game Commission.

RESULTS

The economic review indicated that over $250 million is spent in Idaho every year on wildlife-based recreation, including approximately $90 million on hunting, $120 million on fishing, and almost $50 million on wildlife watching. Gaps in economic information that could be useful in IDFG programs were identified. A popular version of the review was published in IDFG's magazine, *Idaho Wildlife* (Beucler and Toweill 1995).

The Idaho Wildife Federation printed a mail-back questionnaire regarding wildlife issues in Idaho on the back of a recruitment letter mailed to non-residents. The Responsive Management staff summarized and reported the results (Beucler 1995). Out of 1,421 responses, two-thirds had a satisfactory hunting experience in Idaho, and 83 percent were willing to return to Idaho despite the high cost for non-residents. A bell-shaped curve of the responses regarding hunting fees may indicate that the current cost

has reached a point of resistance to higher fees among non-residents. Although the results of the questionnaire need to be interpreted with care, residents and non-residents apparently perceive some wildlife issues very differently. For example, most non-residents appeared more accepting of road closures than residents, and only six percent of the respondents favored having less designated wilderness in Idaho.

I attended the Organization of Wildlife Planners annual meeting in Monterey, California. Topics included ecosystem planning, public involvement in agency planning, taking leadership on public trust issues in a shared-power world, organizational chance, and elements of team building. Conference materials were routed to IDFG personnel who had an interest. I will continue to attend these meetings to network and hear the successes and failures of other Responsive Management (and similar) programs.

RECOMMENDATIONS

A reference/cataloguing system could be developed that would greatly improve the accessibility of human dimensions information.

The establishment of a "Human Dimensions" team could enhance the collection, dissemination, and application of human dimensions information.

LITERATURE CITED

Beucler, M. 1995. Idaho wildlife issues survey: preliminary insight into non-resident hunters' opinions. Idaho Department of Fish and Game Report. Boise, Idaho.

Beucler, M., and D.E. Toweill. 1995. What's it worth? The contribution of fish and wildlife to Idaho's economy. Idaho Wildlife 15(4):11-13.

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Panhandle Region Technical Assistance

Subproject: II

Job No.: 1

Period Covered: July 1, 1994 to June 30, 1996

ABSTRACT

Forest management, stream and lakeshore alterations, and land development issues required the greatest amount of time and effort. Major emphasis was placed on the timber sale programs of the Idaho Department of Lands (IDL) and U. S. Forest Service (USFS), and working with the Kootenai County stormwater committee to develop a draft stormwater ordinance. Relicensing of the Washington Water Power Company's (WWP) lower Clark Fork River projects also got underway in 1995 and will become a major issue over the next few years.

I also worked cooperatively with fish management staff on fish data collection efforts in order to improve the knowledge base on which to base comments. Data for Trapper Creek and the Wolf Lodge Creek drainage were collected and analyzed.

Author:

Chip Corsi
Environmental Staff Biologist

OBJECTIVES

To influence land-use decisions in the Panhandle Region to protect or improve fish and wildlife habitat.

To provide other agencies, organizations, or individuals with technical guidance, assistance, advice, or comments on projects and activities or developments that might affect or are associated with fish and wildlife habitat in the region.

To comment on National Environmental Policy Act documents, Federal Energy Regulatory Commission (FERC) documents, stream channel and lakeshore alteration proposals, land-use planning, and other environmental impacts.

To coordinate with other Idaho Department of Fish and Game (IDFG) personnel and volunteers to meet workload demands.

To continue to seek opportunities to improve monitoring and baseline data collection abilities and to conduct field reconnaissance of project sites to improve the quality of responses.

To continue to work closely with other agencies, the public, and industry representatives to prevent or reduce impacts to fish and wildlife.

METHODS

I used personal contacts, project and document reviews, and field inspections as a basis for providing technical guidance on projects, activities, or proposals that could affect fish and wildlife resources in the Panhandle Region. I used electrofishing and direct observation to obtain data on fish populations.

RESULTS

During the project year, I provided written comments on 311 habitat-related issues. In addition, I attended 168 meetings or site visits to review problems or examine

proposals and projects (Table 1). As in previous years, the greatest number of contacts were with IDL, Idaho Department of Water Resources (IDWR), USFS, and on city or county planning and zoning issues. The overall number of contacts dropped from previous years despite an increase in the number of IDL and USFS timber sales reviewed from 1994 to 1995. There were fewer requests in 1995 for assistance on stream and lakeshore alterations from IDWR and IDL, respectively. Also, less emphasis was on individual subdivision proposals from cities and counties, in part because area growth slowed somewhat, more requests were for larger acreage splits with fewer impacts, and because I made a shift in priorities to provide more emphasis on county planning and ordinance development. The relicensing process for WWP's lower Clark Fork River projects was initiated in 1995 and will require considerable effort in the coming years.

IDL appears to be making progress with their timber program on habitat issues, particularly with riparian management. More consideration is being given to large organic debris recruitment to streams, wildlife travel corridors, and snag retention. At the end of 1995, IDL hired a full-time fisheries biologist to work with their resource staff on fish habitat issues. I served on the interview board during the hiring process. I also gave a presentation on Idaho fish and their habitat requirements at an all-personnel IDL meeting.

Timber harvest planning on USFS-managed lands began to increase in late 1995 in response to the Rescissions Act signed into law last summer. Considerable salvage activity can be expected in the coming year on the Idaho Panhandle National Forest (Forest); however, at this time they are largely proposing to restrict activity to existing roads and will obliterate roads as sales close. The net result will be a reduction in road mileage. Flooding in early December resulted in serious damage to several road systems and watersheds around the Forest, and much of the damage cannot be fully assessed at this time. A considerable amount of my 1996 workload will likely be focused on flood damage repair, both on and off of the Forest.

Reconstruction of Forest Highway 9 from Murray to Thompson Pass began in 1995. Mitigation includes conversion of old tailings piles to wetlands and a fish pond. Fish pond development is a high priority in the Coeur d'Alene River corridor because it will allow for a publicly acceptable way to eliminate stocking of the river and allow focus on management for wild trout and their habitat.

Major issues identified by the IDFG for the relicensing of the WWP projects include fish passage, flow management below the Cabinet Gorge Dam, water temperature, sediment transport, and the effect of the dams and flows on island formation and

Table 1. Summary of technical assistance contacts by Panhandle Region environmental staff biologist during the period January 1995 through December 1995.

Agency /Group	Written	Meetings/Site Visits	Total
US Forest Service	56	17	73
Idaho Department of Lands			
-Timber	41	15	56
-Nav. Waters	69	1	70
-Mining	3	1	4
Idaho Department of Water Resources	44	12	56
US Army Corps of Engineers	16	13	29
City/County Planning and Zoning	27	15	42
US Bureau of Land Management	4	2	6
Division of Environmental Quality	5	3	8
Coeur d'Alene Basin Groups	0	10	10
Outfitters and Guides	12	0	12
Idaho Transportation Department	1	1	2
US Armed Services	0	1	1
Federal Highway Administration	1	0	1

Table 1. Continued

Agency /Group	Written	Meetings/Site Visits	Total
US Fish and Wildlife Service	0	1	1
Clean Lakes	2	3	5
Utilities	1	0	1
FERC	2	7	9
Panhandle Area Council	6	1	7
Natural Resources Conservation Service	1	1	2
Media	0	2	2
School/Conservation /Sportsmen Groups	1	17	18
Individuals	7	5	12
Developers	5	3	8
Timber Industry	3	4	7
In House	4	33	37
Totals	**311**	**168**	**479**

erosion in the Clark Fork delta. A periphery issue to WWP relicensing in the lower Clark Fork is the proposed ASARCO mine along Rock Creek at the upper end of the Cabinet Gorge reservoir in Montana. The IDFG commented on this important issue because of its potential impact on mitigation opportunities and downstream water quality.

The IDFG continues to provide technical input on restoration activities associated with the clean-up of mine waste in the Coeur d'Alene basin.

Monitoring in Trapper Creek (Upper Priest Lake tributary) showed bull trout continuing to persist although numbers of YOY were down substantially from previous years (Tables 2 and 3). Estimated cutthroat trout numbers were similar to those found in 1994 at all three sampling sites (Table 2). Only two bull trout redds were counted in 1995, compared with four in both 1993 and 1994.

Baseline monitoring data was collected from streams in the Wolf Lodge Creek drainage to aid in assessment of the effects of the Horizon Timber sale on fish populations in the Wolf Lodge Creek drainage. Seven sites were electrofished, but population estimates were not made for all sites due to lack of fish and/or poor sampling efficiency. Cedar, Searchlight, and Stella creeks indicated fair to good reproduction of westslope cutthroat trout. One mature adult cutthroat trout (369 mm total length), probably a lake migrant, was captured in Wolf Lodge Creek. Marie and Wolf Lodge creeks had very low densities of fish, and in some cases brook trout were the dominant species (Table 4). All age classes of brook trout were found, including one which measured 340 mm. The good reproduction in Cedar Creek is indicative of a successful habitat enhancement project directed by the IDFG, in the 1980s, as mitigation for the construction of the I-90 interstate through Cedar Canyon. Habitat in Searchlight Creek appeared to be in good condition, but reaches of Stella and Marie creeks were severely braided and/or dry in mid-July. Habitat restoration work in Wolf Lodge Creek appears to be beneficial in maintaining bank stability and providing habitat features, but bedload aggradation and transport remains high and is negatively affecting habitat.

Table 2. Estimated densities of bull trout and westslope cutthroat trout (fish/100m^2) from Trapper Creek sampling sites.

Species	Location	Year 1991	**1992**	1993	1994	1995
Cutthroat	Below E. Fork	4.3	3.8	1.3	4.5	3.8
	Above Lower Bridge	7.3	15.2	*	26.5	15.2
	East Fork	*	14.6	13.2	20.5	21.4
Bull Trout	Below E. Fork	5.1	3.0	4.5	8.3	3.7

Table 3. Population estimates by size class for various size classes (in mm) of bull trout collected from the lower Trapper Creek site, Upper Priest Lake drainage, Idaho.

	Population estimate (95% CI)		
Year	30 - 79	80 - 139	> 139
1992	12 ($0 \leq N \leq 19$)	24($9 \leq N \leq 33$)	1 (N/A)
1993	36 ($29 \leq N \leq 44$)	15($8 \leq N \leq 22$)	1 (N/A)
1994	63 ($22 \leq N \leq 103$)	37($22 \leq N \leq 53$)	0
1995	5 ($3 \leq N \leq 7$)	38($29 \leq N \leq 47$)	1 (N/A)

Table 4. Estimated densities of fish populations (fish/100m^2) in the Wolf Lodge Creek drainage.

	Cutthroat			Brook Trout		
Stream	YOY	Juv	Adult	YOY	Juv	Adult
Searchlight	13.5*	39.0	#	0	0	0
Stella (USFS)	76.4*	0	0	0	0	0
Marie (near mouth)	1.3*	2.3*	#	0	1.0	0
Marie Creek (USFS)	< 1.0*	0	0	< 1.0*	0	0
Cedar (I-90)	92.0	5.5	0	0	0	0
Wolf Lodge (Funk's)	2.1	< 1.0*	0	< 1.0*	0.6	#
Wolf Lodge (F&G)	< 1.0*	<1.0*	<1.0*	< 1.0*	0.4	#

*minimum estimate due to poor sampling efficiency
#estimate for adults and juveniles calculated together

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Clearwater Region Technical Assistance

Subproject: II

Job No.: 2

Period Covered: July 1, 1994 to June 30, 1996

ABSTRACT

During the project year, comments and technical input were provided on proposals, issues, and developments that might affect fish and wildlife resources in the Clearwater Region. The primary issues were U.S. Forest Service (USFS) and Idaho Department of Lands (IDL) timber sales, coordination with the Clearwater and Nez Perce national forests, technical work on USFS-Idaho Department of Fish and Game (IDFG) draft elk guidelines, and stream alteration projects. This was the first year for the environmental biologist position in the Clearwater Region. Considerable time was spent defining how the position interacts with regional personnel and responsibilities within the IDFG reorganization. Stream alteration permits, Corps of Engineers, Department of Transportation input, and water impact response responsibilities were not transferred to the environmental biologist position until 1996. Time was also devoted to IDFG obligations related to public involvement efforts on behalf of the Citizens Advisory Committee on big game seasons.

Author:

Gregg Servheen
Environmental Staff Biologist

OBJECTIVES

To provide fish and wildlife technical assistance and information to state, federal, and local government agencies.

To coordinate IDFG input on proposed developments, mitigation, and impacts to fish and wildlife resources.

To provide written responses and documentation on IDFG positions and policies related to local fish and wildlife issues.

To provide internal input and comment on how IDFG policies, rules, regulations, and positions will affect other natural resource management agencies and private elements.

To support IDFG fish and wildlife management efforts by participating in fish and wildlife surveys and interdisciplinary teams.

METHODS

Letter and document review; meetings; personal, e-mail, and phone contacts; written responses; and field inspections were used to provide fish and wildlife input and internal coordination.

RESULTS

This year was the first year of this position in the Clearwater Region. During much of the first half of 1995, the responsibilities and jobs of the environmental biologist position in relation to existing regional jobs and responsibilities were mapped out. In particular, I made efforts to define the Clearwater environmental staff biologist as a contact person for fisheries-related issues, including stream protection, road construction, water rights, community/county planning, outfitters and guides issues, and gain knowledge in stream and fisheries issues as well as interagency input processes. Therefore, these areas did not receive the full attention of this position until late 1995. Projects under the Venture 20 project to integrate USFS and IDFG fish and wildlife management efforts were continued (see Table 1).

Table 1. Summary of Technical Consultation.

	Type of Contact		
Agency or Group	**Written**	**Meetings/Site Visits**	**Total**
US Forest Service	45	37	119
Idaho Department of Lands	14	3	17
Idaho Department of Water Resources	6	2	8
Municipalities	5	1	6
Army Corps of Engineers	2	0	2
Idaho Department of Transportation	4	0	4
Power Companies	2	2	4
National Resource Conservation Service	0	1	1
Advisory Groups	0	5	5
Outfitters and Guides	4	5	9
Division of Environmental Quality	0	1	1
Nez Perce Tribe	2	3	5
Timber Industry	0	2	0
In House	2	30	32
County	1	0	1
Public/Individual	1	4	5
Idaho Parks and Recreation	0	1	1
Totals	90	103	193

Projects of Note

I continued working on drafting a set of interagency guidelines for elk management. The agencies involved (Clearwater National Forest, Nez Perce National Forest, Nez Perce Tribe, and the IDFG) initiated two technical teams under the Venture 20 project. The objective of one team was to standardize and update the use of an elk habitat effectiveness model across the forests. The objective of the second team was to devise and implement a bull elk vulnerability model for use in measuring forest management effects on elk vulnerability. The teams were later merged to develop an overall set of elk management guidelines. The draft guidelines include both elk habitat effectiveness and elk vulnerability models to provide land managers information on land management impacts. The guidelines will be out for final review in 1996 and subsequently will be included in both the Clearwater and Nez Perce forest plans.

I completed a standardized and peer-reviewed manual of TES wildlife surveys as initiated under the Venture 20 project. The manual includes a quick-reference matrix for survey needs and design, standard formats for each survey, and technical information references. The manual includes surveys for bats, woodpeckers, salamanders, harlequin ducks, wolves, forest owls, goshawks, reporting protocols, and observations forms for T and E species and Conservation Data Center reports. The manual also includes all survey protocols and information collection forms used for game management by IDFG.

I continued participation and promotion of the Interagency Leadership Team. This team, initiated under the Venture 20 project, consists of the forest and regional supervisors of the Clearwater National Forest, the Nez Perce National Forest, the IDFG, and the Bureau of Land Management. The team, which meets four times per year, coordinates the actions of their respective agencies and provides a forum for resolving technical and policy differences between the agencies at a local level.

Significant environmental biologist time was spent on obligations and responsibilities internal to IDFG. Monitoring surveys accomplished included black bear scent station transects, hunter check station surveys, Unit 12 and 17 elk surveys, and mountain lakes surveys. Obligations also required I plan and implement the February 1995 Bureau of Wildlife meeting. In the Clearwater Region, I participated in the public scoping and open-house process of the Citizens Advisory Council on elk and deer seasons. A total of 12 open houses were held, and more than 2,000 hunters were contacted about elk and deer season changes and the relation of these changes to access, USFS land management, predator, hunter, and elk vulnerability management.

JOB PERFORMANCE REPORT

State of: Idaho

Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2

Title: Southwest Region Technical Assistance

Subproject: II

Job No. 3

Period Covered: July 1, 1994 to June 30, 1996

ABSTRACT

The majority of interactions were with state and federal agencies on a variety of land and water management issues having potential impacts on fish and wildlife habitats. A significant amount of effort was directed towards intradepartment technical assistance and coordination. Important issues were forest and range management, stream channel alterations, urban planning and development, and field work associated with the state of Idaho Antidegradation Program.

Author:

Scott A. Grunder
Environmental Staff Biologist

OBJECTIVES

To provide technical assistance to city, county, private, state, and federal entities in matters relating to fish and wildlife resources in the Southwest Region of the Idaho Department of Fish and Game (IDFG).

To assist the Division of Environmental Quality (DEQ) in collecting data pertaining to fish resources as part of the IDFG's responsibility under the State of Idaho Antidegradation Program.

METHODS

During the 1995 project year, the Southwest Region environmental staff biologist provided technical assistance on a variety of land and water management issues that could have affected fish and wildlife habitats. This was typically done as either written or oral comments. Technical review was closely coordinated with other IDFG staff in both the regional and headquarters offices. Example issues were timber harvest, mining, grazing allotment management plans, water rights, land-use planning and development, stream channel alterations, and water quality and quantity. Many inter-/intra-agency meetings were needed to discuss and resolve sometimes contentious proposals.

In the summer of 1995, fish populations were jointly assessed with the DEQ in a number of state-designated Stream Segments of Concern as part of the State of Idaho Antidegradation Program. We used the general guidelines established by Chandler et al. (1993) and IDFG expertise to sample fish populations.

RESULTS

The Southwest Region staff biologist provided technical assistance and review on 746 separate habitat-related issues. Additionally, another 126 field reviews and meetings were attended to gather information relevant to the various proposals (Table 1). The majority of external effort was directed towards the Idaho Department of Water Resources (IDWR) (22 percent), a combination of public/conservation groups/media/private consultants/and developers (13 percent), US Forest Service

Table 1. Summary of technical assistance contacts by the Southwest Region environmental staff biologist during the period January 1995 through December 1995.

	Type of Contact		
Agency/Group	**Written**	**Meetings/Site Visits**	**Total**
US Forest Service	55	20	75
US Bureau of Land Management	10	4	14
US Army Corps of Engineers	34	2	36
US Environmental Protection Agency	2	0	2
US Bureau of Reclamation	5	4	9
US Fish & Wildlife Service	8	0	8
Federal Energy Regulatory Commission	13	2	15
US Armed Services	0	1	1
Federal Highway Administration	2	1	3
Idaho Department of Water Resources	180	12	192
Idaho Department of Parks & Recreation	1	0	1
Idaho Department of Lands	20	4	24
Idaho Division of Environmental Quality	5	3	8
Idaho Department of Transportation	10	0	10
Idaho Department of Agriculture	1	2	3
Idaho State Land Board	0	2	2
Idaho Attorney General's Office	1	0	1
City/County Governments	62	5	67
Public/Conservation/Media/			
Consultants/Developers	83	27	110

Written	Meetings/Site Visits	Total
4	0	4
16	5	21
3	6	9
1	1	2
2	1	3
228	24	252
746	126	872

(USFS) (9 percent), and city/county governments (8 percent). The intradepartment workload has increased significantly during the past several years as responsibilities and the number of field staff have increased resulting in more coordination of activities. Overall, the number of technical guidance contacts handled in 1995 represents an approximate 16 percent increase over that documented during the 1994 project year. Most of the increase is related to intradepartment coordination efforts.

The environmental staff biologist for the Southwest Region actively participated in four ongoing committee assignments during the project year, which is much reduced from years past.

Antidegradation Program Monitoring--Stream Segments of Concern

Summaries of fish population data and stream sampling locations collected by the IDFG and DEQ during the summer of 1995 in 25 Stream Segments of Concern are found in Tables 2-3. Salmonids were present in most locations. Wild rainbow trout are classified as the redband variety *(Oncorhynchus mykiss gairdneri).* No bull trout *(Salvelinus confluentus)* were collected during these assessments.

Planning and Zoning Issues

The staff biologist and other regional personnel actively participated in a number of forums regarding residential and commercial developments in the Southwest Region. Most recent activity is situated in Ada, Canyon, Boise, and Valley counties. Comments were supplied to planning and zoning staff and commissions, and city and county elected officials. The IDFG commented on a number of important planning documents or proposals including the Ada County Comprehensive Plan, City of Boise Comprehensive Plan, Foothills Plan, Bogus Basin Recreation Management Plan, and the Foothills Loop Road Proposal. All of these planning documents contain goals or objectives which may allow limited development in critical wildlife habitats. Our goal is to educate planning and zoning staff and elected officials as to the consequences of their actions and offer recommendations as to how to avoid or mitigate for development in important wildlife areas. This has evolved into a significant effort on behalf of IDFG staff, but we believe our intervention is critical.

Table 2. Locations of stream segments assessed in the summer of 1995 by the Idaho Department of Fish and Game and Division of Environmental Quality, Southwest Region.

Stream	Topographic 1:100K Quad	Longitude	Latitude	Township	Range	Section
Castle(L)	Triangle	116°18'	42°51'	05S	01E	13
Castle(U)	Triangle	116°37'	42°51'	05S	01W	10
Sinker(L)	Murphy	116 °22'	43°10'	03S	01W	13
Sinker(M)	Murphy	116°31'	43 °07'	04S	02W	11
Sinker(U)	Murphy	116°37'	43°05'	04S	03W	24
Picket(U)	Triangle	116°33'	42°59'	05S	02W	10
Picket(M)	Triangle	116°33'	42°59'	05S	02W	10
Deep(L)	Riddle	116°39'	42°23'	12S	03W	11
Deep(U)	Triangle	116°40'	42°34'	l0S	03W	03
Nickel	Triangle	116°46'	42°32'	10S	04W	23
Pole(L)	Riddle	116°38'	42°28'	11S	02W	18
Johnson	McCall	116°32'	44°42'	16N	02W	23
WF Pine(U)	McCall	116°51'	44°37'	15N	04W	20
WF Pine(M)	McCall	116°47'	44°36'	15N	04W	35

Table 2. Continued.

Stream	Topographic 1:100K Quad	Longitude	Latitude	Township	Range	Section
WF Pine(L)	McCall	116°45'	44 °35'	15N	03W	31
French(L)	McCall	116°06'	44°31'	14N	03W	21
French(U)	McCall	116°06'	44°31 '	14N	03E	29
VanWyck(L)	McCall	116°07'	44°32	14N	03E	20
VanWyck(U)	McCall	116°07'	44°32'	14N	03E	20
Silver(L)	McCall	116°08'	44°32'	14N	03E	18
Silver(U)	McCall	116°08'	44°32'	14N	03E	18
Deer(L)	McCall	116°08'	44°33'	14N	03E	07
Deer(U)	McCall	116°09'	44°34'	14N	03E	17
Duck(L)	McCall	116°07'	44°37'	15N	03E	20
Duck(U)	McCall	116°09'	44°37'	15N	03E	18
Poison(L)	McCall	116°06'	44°39'	15N	03E	05
Fall(L)	McCall	116°02'	44°58'	19N	03E	26
Fall(M)	McCall	116°00'	44°55'	19N	03E	24
Fall(U)	McCall	116°02'	44°57'	19N	04E	19
Landing	McCall	116 °05	45°00	19N	03E	09

Table 2. Continued.

Stream	Topographic 1:100K Quad	Longitude	Latitude	Township	Range	Section
Deadhorse	McCall	116°04'	44°58'	19N	03E	15
Elip	Riggins	116°01'	45°00	19N	03E	11
Box(M)	Riggins	116°03'	45°02'	20N	04E	25
Box(L)	Riggins	116°03'	45°04'	20N	03E	35
Cougar	Riggins	116°02'	45°15'	21N	04E	19
Willow	McCall	116°04'	44°43'	16N	03E	14
LakeFork	McCall	116°05'	44°46'	17N	03E	27
Deep	McCall	116 ,!	45°05'	20N	03E	01
20Mile(U)	Warren	115°59'	45°08'	21N	04E	27
20Mile(M)	Warren	115°58'	45°08'	21N	04E	28
20Mile(L)	Warren	115°58'	45°08'	21N	04E	28

Table 3. Number of fish collected per species with electrofishing gear at each stream sampling station by the IDIG and DEQ in the summer of 1995, Southwest Region.

Species Legend: WRB-rainbow/redband trout; BKT-brook trout; LSS/BLS-largescale sucker/bridgelip sucker; S1'D-speckled dace; SCULPIN-piute, mottled, shorthead sculpins; LND-longnose dace; RSS-redside shiner; MWF-mountain whitefish; CSL-chiselmouth chub; NSF-northern squawfish; SMB-smallmouth bass.

Stream	Date	WRB	BKT	LSS/BLS	SPD	SCULPIN	LND	RSS	MWF	CSL	NSF	SMB
Castle(L)	6-13	1		43								
Sinker(L)	6-14	2		39	127							
Sinker(M)	6-14	21			323							
Sinker(U)	6-14	15			2							
Picket(U)	6-15	No Fish										
Picket(M)	6-15	No Fish										
Castle(U)	6-15	18		102	14							
Deep(L)	6-29			7	14	2	1	20		2	11	1
Deep(U)	6-29			21	25			42				
Nickel	6-29				31			1				
Pole(L)	6-30			16	5			4		2	16	
Johnson	7-11	5				7	1					

Table 3. Continued.

Stream	Date	WRB	BKT	LSS/BLS	SPD	SCULPIN	LND	RSS	MWF	CSI.	NSF'	SMB
WF Pine(U)	7-12	19				8						
WF Pine(M)	7-12	11				82						
WF Pine (L)	7-12	11				48						
French(L)	7-25	13		2								
French(U)	7-25	9										
VanWyck(L)	7-25	15		2								
VanWyck(U)	7-25	6										
Silver(L)	7-25	12										
Silver(U)	7-25	No Fish										
Deer(L)	7-28	18										
Deer(U)	7-28	2										
Duck(L)	7-28	2	9			15			1			
Duck(U)	7-28	3	17			4						
Poison(L)	7-28	2				1			7			
Fall(L)	8-08	2	28			15						
Fall(M)	8-08	11	20			19						

Table 3. Continued.

Stream	Date	WRB	BKT	LSS/BLS	SPD	SCULPIN	LND	RSS	MWF	CSL	NSF	SMB
Fall(U)	8-08	9										
Landing	8-09		52									
Deadhorse	8-09	10	1									
Elip	8-09	No Fish										
Box(M)	8-10	14	28									
Box(L)	8-10	20	20									
Cougar	8-10		1			1						
Willow	8-11					23		2				
LakeFork	8-11			6	3	11		17			6	
Deep	8-14	46										
20Mile(U)	8-15		30									
20Mile(M)	8-15		23									
20Mile(L)	8-15		11									

Recreational Dredge Mining--Middle Fork Boise River

For the past several years, the Southwest Region staff biologist has directed much effort towards compiling scientific literature, providing information, and developing the IDFG' s position on the topic of recreational dredge mining in the Middle Fork Boise River below its confluence with Roaring River. This stems from a proposal by the Idaho Gold Prospectors Association (IGPA) to seek a change in status of the river reach below Roaring River to its confluence with the North Fork Boise River from closed to open to dredge mining. These confounding factors need to be considered with attempts to change the current closure to mining:

1. The bed of the Middle Fork Boise River was withdrawn from mineral entry by the Idaho State Board of Land Commissioners in 1982 from the east boundary of T05N, R08E, B.M., downstream to the west boundary of Section 1, T03N, R05E, B.M., due to conflicts between anglers and dredge miners. This is a navigable river reach of the Boise River and the state claims title to the bed.

2. Recreational dredge or placer mining is prohibited in the Middle Fork Boise River between Roaring River and the North Fork Boise River confluences since this reach is a State Protected River.

3. The Middle Fork Boise River between Roaring River and Arrowrock Dam is closed to dredge mining under the One-Stop Permit System of the IDWR.

The IGPA has attempted to change the status of all the current closure stipulations to gain re-entry into this area for dredge mining. They have appeared before the State Land Board Commissioners on several occasions to ask for reversal of the mineral entry withdrawal; they have appeared before the Idaho Water Resource Board to seek to allow dredge mining in a State Protected River; they have asked the IDWR to allow dredge mining in this currently closed river reach. Additionally, they have had audiences with the IDFG and Idaho Parks and Recreation commissions. To date, no changes have been made to the current closures of the Middle Fork to recreational dredge mining.

The last attempt to date by the IGPA to seek reversal of the mineral entry withdrawal came in March 1995 before the newly-elected State Land Board Commissioners. Just prior to that, the Land Board directed the Idaho Department of Lands (IDL) to hold a

public hearing to solicit testimony on the proposal. The Southwest Region staff biologist prepared written testimony describing the IDFG's concerns with dredge mining and summarized the scientific literature available on the topic. This testimony was presented to IDL recorders at the meeting on February 27, 1995 (Appendix 1). This testimony was included in a brief given each Land Board member. At the Land Board meeting on March 14, 1995, the commissioners declined to reopen the area to mineral entry citing a lack of science supporting the IGPA's contentions that dredge mining was beneficial to or neutral in its impacts to aquatic resources and stream channels. We believe IDFG testimony was instrumental in eliciting that decision. The USFS recently released (September 29, 1995) a report describing the effects of suction dredging on streams (Harvey et al. 1995). Their findings and conclusions generally support our earlier testimony.

LITERATURE CITED

Chandler, G.L., T.R. Maret, and D. W. Zaroban. 1993. Protocols for assessment of biotic integrity (fish) in Idaho streams. Water Quality Monitoring Protocols-Report No. 6. Idaho Department of Health and Welfare, Division of Environmental Quality, Boise, Idaho.

Harvey, B.C., D.C. Fredley, T.E. Lisle, and T. Vallier. 1995. Effects of suction dredging on streams: A review and evaluation strategy. Pursuant to a charter by Gray F. Reynolds, Deputy Chief, National Forest System, USDA Forest Service of April 18, 1995.

Appendix 1. Testimony of the Idaho Department of Fish and Game Regarding the Proposal by the Idaho Gold Prospectors Club to Reopen the Middle Fork Boise River Below Roaring River to Motorized Recreational Dredge Mining

Presented by Scott A. Grunder, Environmental Staff Biologist
Idaho Department of Fish and Game, Southwest Region, Nampa

My name is Scott Grunder, and I am a biologist with the Idaho Department of Fish and Game (IDFG) stationed in the Southwest Regional Office in Nampa. I am in my tenth year as an employee with the IDFG. I have a bachelor of science degree in fish and wildlife science from South Dakota State University and a master of science degree in biology from Idaho State University. In my graduate student research project, I used a modified suction dredge in an attempt to rehabilitate trout habitat in a spring-fed stream in south-central Idaho impacted by sediment (Grunder 1985). I am a Certified Fisheries Scientist as recognized by the American Fisheries Society.

The Middle Fork Boise River is recognized as a Key Watershed in the Draft Conservation Assessment and Strategy for Bull Trout. Redband trout, another state-listed Species of Special Concern, are present in the drainage. This river reach contains important summer and winter habitats for both species. Bull trout juveniles are strongly dependent on the streambed for hiding cover (Pratt 1984). Many fish species, particularly certain age classes of fish, are primarily associated with the stream bottom. Older juvenile and adult fish of some species may spend years living in or on the streambed.

The IDFG recognizes there is a long history of development impacts to Idaho's rivers and streams. These include the construction of dams, commercial mining, road building and logging, unregulated hunting and fishing, and improper livestock management. The cumulative impacts of the above mentioned activities have detrimentally impacted the health of fish and wildlife habitats and populations. Impacts caused by any single activity are sometimes difficult to assess, however, cumulative impacts are significant.

The IDFG is concerned with all potential negative impacts due to the continuing decline of native fisheries and stream environments in the state. We believe that recreational dredge mining in the Middle Fork Boise River will contribute to deteriorating habitat and fish populations in this drainage**.** I wish to present information regarding the documented and suspected effects of motorized recreational dredge mining on fish and wildlife resources.

Benefits of suction dredging reported by miners include improvement of spawning gravels, removal of lead and mercury from rivers, removal of submerged garbage, and the feeding of fish from insect drift. The removal of heavy metals and garbage from stream channels can be positive but the overall impact is limited to mined areas and is localized. Dislodged insects do provide food for fish; however, it is only incidental to the activity and the benefit is temporary. There is absolutely no evidence to suggest that fish growth rates are improved by dredging activity. It should be noted that adult bull trout are primarily fish-eaters and generally will not feed on insect drift. Native salmonids living in relatively intact habitat do not require supplemental feeding in order to survive.

The effects of unregulated suction dredging on the aquatic environment and fish are documented in the scientific literature. Most studies were limited to dredges with intake nozzle sizes of six inches or less in diameter. Generally, they assessed the impacts of suction dredging in cold water streams that support trout (including steelhead), char, and salmon. In all of the studies, adverse impacts to aquatic environments and resources were reported. Some were temporary and localized (Stern 1988; Harvey et al. 1982; Thomas 1985; Somer and Hassler 1992; North 1993), while others were long-term in nature (Stern 1988; Thomas 1985; North 1993; McCleneghan and Johnson 1983). In many cases cited by the California Department of Fish and Game (1994), the degree of impact is related to the time of year, dredge size, amount of material dredged, density of dredges on a stream, type of sediment encountered, the size of the stream or river and stream flow (Harvey 1986; Hassler et al. 1986; Thomas 1985; Griffith and Andrews 1981; Harvey et al. 1982; Stern 1988; North 1993).

Generally, increased turbidity and sedimentation levels, decreases in aquatic macroinvertebrate populations and changes of the streambed were temporary and localized (Stern 1988; Harvey et al. 1982; Thomas 1985; North 1993). The effects of suction dredging on stream banks and stream channels and riparian habitat tended to be long-term (Stern 1988; Thomas 1985; North 1993; McCleneghan and Johnson 1983). Suction dredging negatively affects fisheries by entraining fish eggs and fry, degrading water quality, increasing substrate embeddedness, reducing instream cover, depressing aquatic invertebrate populations, destabilizing stream channels and banks, damaging riparian vegetation, and generally decreasing instream habitat diversity and complexity (Stern 1988).

We could find only one suggested positive effect of suction dredging in the scientific literature. Lewis (1962) reported that suction dredging could be positive to spawning gravels if dredging occurred in a uniform manner instead of the common pocket and pile method. However, Thomas (1985) reported that suction dredging increases gravel

permeability by only an insignificant amount and Hassler et al. (1986) found that dredge tailings do not create good spawning habitat for salmonids until dispersed. Typically, salmonids are well equipped to move gravels and free them of sediment all by themselves without artificial means. Most salmonid species spawn in tributaries and not mainstem rivers; therefore, the so-called improvement of spawning gravels will not benefit species such as bull trout or redband trout.

The IDFG is managing the reach of the Middle Fork Boise River below Kirby Dam as a quality wild trout fishery where harvest is limited to two fish where none under 14 inches in length may be kept. No hatchery fish are stocked. The harvest of bull trout is prohibited here as it is in most of the state. In this program, we are relying exclusively on natural reproduction of wild fish. Of the roughly 26,000 miles of fishable streams in Idaho, the IDFG manages only eight percent in this manner. It has been a successful program with much public support. The fundamental key to continued statewide success of this program is maintenance of good quality habitat for fish and wildlife.

The IDFG is concerned with the potential impact of recreational dredge mining on recreational fishing in this river. In 1982, this river section was withdrawn from mineral entry by the State Land Board based on concerns of anglers. One of the IDFG's primary functions is to provide quality fishing opportunities to the public. Anglers will no doubt make their concerns known to you. Based on an IDFG creel survey conducted by Rohrer (1989), we conservatively estimate the annual economic value of this fishery at between $40,000 to $50,000 using information found in Sorg et al. (1985). This figure will continue to rise based on increasing population trends observed in southwestern Idaho and the demand for more fishing opportunities, particularly for quality stream fishing.

It should be noted that suction dredging is considered a legitimate activity on Idaho's streams and rivers, and operators have as much right as any other river user to enjoy and utilize rivers as long as their activities abide by the laws and regulations of the state of Idaho. We have a set of laws and regulations in Idaho pertaining to recreational dredge mining. Certain drainages or river segments have been closed to recreational dredge mining due to concerns for declining native salmonid populations. It should be noted that the IDFG is managing entire drainages such as the South Fork Salmon River through preservation fisheries because of depleted fish stocks.

The Idaho Department of Water Resources, IDFG, and other interested state and federal agencies have attempted to develop a biologically defensible and equitable program to allow recreational mining opportunities in Idaho while trying to minimize

adverse impacts to aquatic environments and resources. Without these regulations, the impacts of suction dredging to the environment would be significant and deleterious. The IDFG believes there is already ample scientific evidence pertaining to suction dredging and its temporary and long-term adverse effects on streams and aquatic resources to warrant continued closure of the river reach in question.

In summary, we believe the scientific literature decribes no measureable beneficial impacts of suction dredging, while citing numerous cases of adverse effects on fish and wildlife habitats, both short- and long-term.

LITERATURE CITED

California Department of Fish and Game. 1994. Final Environmental Impact Report. Adoption of Regulations for Suction Dredge Mining. State of California, The Resources Agency, Sacramento, California.

Griffith, J.S. and D.A. Andrews. 1981. Effects of a small suction dredge on fishes and aquatic invertebrates in Idaho streams. North American Journal of Fisheries Management 1:21-28.

Grunder, S.A. 1985. Biotic responses to sediment removal in a tributary of Silver Creek, Idaho. Master's Thesis. Idaho State University, Pocatello, Idaho.

Harvey, B.C. 1986. Effects of suction gold dredging on fish and invertebrates in two California streams. North American Journal of Fisheries Management 6: 401-409.

Harvey, B.C., K. McCleneghan, J.D. Linn and C.L. Langley. 1982. Some physical and biological effects of suction dredge mining. California Department of Fish and Game, Environmental Services Branch, Laboratory Report No. 82-3.

Hassler, T.J., W.L. Somer and G.R. Stern. 1986. Impacts of suction dredge mining on anadromous fish, invertebrates and habitat in Canyon Creek, California. California Cooperative Fishery Research Unit, U.S. Fish and Wildlife Service, Humboldt State University, Cooperative Agreement No. 14-16-0009-1547, Work Order No. 2, Final Report.

Lewis, R.H. 1962. Results of gold suction dredge investigation. Memorandum of September 17, 1962. California Department of Fish and Game, Sacramento, California.

McCleneghan, K. and R.E. Johnson. 1983. Suction dredge gold mining in the Mother Lode Region of California. California Department of Fish and Game, Environmental Services Branch Administrative Report 83-1, Sacramento, California.

North, A.P. 1993. A review of the regulations and literature regarding the environmental impacts of suction gold dredges. U.S. Environmental Protection Agency, Region 10, Alaska Operations Office.

Pratt, K.L. 1984. Habitat use and species interactions of juvenile cutthroat trout *(Salmon clarki lewisi)* and bull trout *(Salvelinus confluentus)* in the upper Flathead River Basin. Master's Thesis. University of Idaho, Moscow, Idaho.

Rohrer, R.L. 1989. Federal Aid in Fish Restoration. Job Performance Report, Project No. F-73-R-11, Subproject III. Idaho Department of Fish and Game, Boise, Idaho.

Somer, W.L. and T.J. Hassler. 1992. Effects of suction-dredge gold mining on benthic invertebrates in a northern California stream. North American Journal of Fisheries Management 12: 244-252.

Sorg, C.F., J.B. Loomis, D.M. Donnelly, G.L. Peterson and L.J. Nelson. 1985. The net economic value of cold and warm water fishing in Idaho. USDA Forest Service Resource Bulletin RM-11. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado.

Stern, G.R. 1988. Effects of suction dredge mining on anadromous salmonid habitat in Canyon Creek, Trinity County, California. Master's Thesis. Humboldt State University, Arcata, California.

Thomas, V.G. 1985. Experimentally determined impacts of a small suction dredge on a Montana stream. North American Journal of Fisheries Management 5: 480-488.

JOB PERFORMANCE REPORT

Name: STATEWIDE TECHNICAL ASSISTANCE

State of: Idaho

Title: Magic Valley Technical Assistance

Project: FW-7-T-1

Job No.: 4

Subproject: II

Period Covered: July 1, 1994 - June 30, 1995

ABSTRACT

During the period January 1, 1995, through December 31, 1995, the Magic Valley Region environmental staff biologist provided comments, technical review, and support on approximately 429 occasions to other federal, state, local, individuals, and private organizations. Additionally, 1,116 documents were reviewed and routed for staff input or information. Assistance provided by the environmental staff biologist addressed impacts to fish and wildlife populations or their associated habitats. Stream channel alterations, Stream Channel Protection Act violations**,** water rights, water quality working groups, antidegradation monitoring, hydropower reviews, and technical assistance pertaining to urban development constituted the majority of the workload. All activities were coordinated and reviewed with the appropriate regional staff and state office personnel for accuracy, thoroughness, and adherence to Idaho Department of Fish and Game (IDFG) policy.

Author:

David E. Parrish
Environmental Staff Biologist

OBJECTIVES

To provide technical assistance and comments to other government agencies (state, federal, and local), organizations, or individuals regarding projects or activities which potentially affect fish or wildlife resources or habitat in the Magic Valley Region. Also, to fulfill IDFG's responsibility to provide fish population status data to the Division of Environmental Quality (DEQ) to fulfill the requirements of Senate Bill 1284 antidegradation legislation.

METHODS

The Magic Valley Region environmental staff biologist used regional staff, field inspections, literature searches, and professional expertise to form comments and furnish recommendations on a variety of land and water management proposals which could affect fish and wildlife resources or their associated habitat.

RESULTS

The following is a breakdown of entities which were provided technical guidance or project review by the Magic Valley Region environmental staff biologist. Each contact represents a meeting or document response:

Bureau of Land Management (BLM)	23
County/City Government	48
Federal Energy Regulatory Commission (FERC)	26
Idaho Department of Commerce	3
Idaho Department of Health and Welfare	
Division of Environmental Quality (DEQ)	20
Idaho Department of Lands (IDL)	5
Idaho Department of Transportation (IDT)	6
Idaho Department of Water Resources (IDWR)	129
Idaho Power Company (IPC)	13
National Parks Service (NPS)	1
Natural Resource Conservation Service (NRCS)	4
Private Development	10

U.S. Army Corps of Engineers (COE)	10
U.S. Fish and Wildlife Service (USFWS)	7
U.S. Forest Service (USFS)	50
Miscellaneous	74
Total	**429**

Major Projects of Interest

Antidegradation Activities

The majority of the field work was conducted with Beneficial Use Reconnaissance Program personnel working for DEQ. Twenty-two streams were sampled within the Magic Valley Region to (1) determine beneficial use attainability, and (2) determine beneficial use support status for each of the identified streams using coldwater salmonids as indicator species in most instances. Because of a modification in fish sampling protocol for 1995, fish species were only sampled for presence/absence and documentation of multiple-year classes. Consequently, no population data can be extrapolated. A listing of streams and Pacific Northwest Rivers System (PNRS) numbers is contained in Appendix 1.

Stream Alterations

Because of high flows associated with 1995 runoff, a total of 105 stream alteration permit applications were reviewed for impacts to fish and wildlife resources. The majority of applications (77) were located in Water Basin 37 and intended to address bank stabilization and flood damage repair along the Big Wood River. Technical assistance was provided to the IDWR, the COE, Blaine County, and to private landowners in reviewing these applications.

Additionally, four Stream Channel Protection Act violations were reviewed within the Magic Valley Region. Recommendations for mitigation and control of resource damage were forwarded to IDWR.

Hydropower

Technical guidance regarding the impact of hydropower developments to fish and wildlife resources required a significant amount of time in 1995. Coordination of fish and wildlife staff comments regarding Idaho Power Company's (IPCO) draft and final license applications for Upper Salmon, Lower Salmon, and Bliss Hhdropower projects required significant resource commitments for document review, public meetings, coordination of staff input, disseminating IDFG position and issues to local interest groups, and field tours of the impacted area. Additionally, IPCO is in the initial stages for completing a draft license application for Shoshone Falls Hydropower Project which required several meetings and document review.

Document review, agency meetings, on-site reviews, inspections and drafting follow-up comments were conducted for the following projects:

Name (Federal Energy Regulatory Commission Number)

Auger Falls (4797)
Bliss (1975)
Cedar Draw (8278)
Kaster (4608)
Koyle Ranch (4052)
Little Mac (6443)
Lower Salmon Falls (2061)
Milner (2899)
Ravenscroft *(4055)*
Sahko (11060)
Shorock (9967)
Shoshone (2778
Twin Falls (18)
Upper Salmon Falls (2777)

Water Quality and Management

Participation and technical guidance was furnished to several groups concerned with water quality and water management in the Magic Valley Region. Specifically, the environmental staff biologist represented IDFG on the Technical and Executive Committees of the DEQ-facilitated Middle Snake River Nutrient Management Committee, the Middle Snake River Irrigators Group, and the Jerome, Lincoln, Twin Falls, Cassia, and Gooding counties Middle Snake River Water Resource Commissions. A final draft of the Middle Snake River Nutrient Management Plan and of Middle Snake River Water Resource Commission Water Management Plan were reviewed and comments issued.

Technical assistance was also provided to Blaine County for the development of a Big Wood River Management Plan to guide Big Wood River watershed streamlfloodplain alterations throughout Blaine County. Plan development is ongoing with an expected completion date of late 1996.

IDWR implemented mandatory water measuring and reporting on all non-domestic diversions in Basin 36. Technical assistance was provided to regional staff regarding adequacy of measuring devices, monitoring frequencies, and reporting requirements. Eleven reports were filed with IDWR covering all IDFG water rights in Basin 36.

Documentation or proof of beneficial use was also required to maintain our existing rights at Centennial Marsh in 1995.

A total of eight new water rights or transfers were protested in the Magic Valley Region during calendar year 1995. All dealt with surface allocation of water for both consumptive and non-consumptive uses. Reasons for protesting included reducing in-stream flows, degrading water quality, appropriation of water which would reduce flow of an existing IDFG water right, point of diversion was moved up-stream in critical stream segments, or additional information was needed to make an accurate assessment of impacts to fish and wildlife resources.

Additionally, 23 pending protests, dating back as far as 1982, were resolved during the year.

Testimony was provided to the IDWR board in support of two minimum stream flow applications: Banbury and Briggs springs. The environmental staff biologist also presented data at the public information meeting for the proposed Billingsley Creek minimum stream flow.

A cooperative venture with the Twin Falls Canal Company, IPCO, and IDFG resulted in acquisition and development of the Cedar Draw Wetland/Water Quality Research Facility. The objectives of the project are (1) to document the volume of topsoil being lost from agricultural practices in the Cedar Draw Creek drainage, (2) to test various wetland plant abilities to remove nutrients and trap sediments from the water column, (3) to test physical design of wetlands in removing sediments and harvesting nutrients stored in plant matter, and (4) to provide waterfowl habitat within the wetland complex which borders existing IDFG property. Minor contributors in the project include Coors Brewing Company, USFWS, University of Idaho, and the NRCS Plant Materials Research Center.

Timber Sales and Sagebrush Eradication Proposals

Nine timber sale proposals were reviewed and responded to in 1995. The majority of the sale proposals were located on the Twin Falls District of the Sawtooth National Forest and the Mountain Home District of the Boise National Forest. All timber sales commented on in 1995 were classified "salvage" and exempted from appeal by national legislation.

Approximately 20 sagebrush eradication proposals to improve range conditions for livestock were reviewed and responded to regarding impacts to fish and wildlife. Control methods included aerial application of herbicides, use of fire, and mechanical removal. Agencies sponsoring the sagebrush removal projects included the NRCS, BLM, IDL, and private landowners.

Residential Developments

In 1995, thirty residential or commercial developments were reviewed and comments provided regarding impacts to fish and wildlife resources in Twin Falls, Jerome, Gooding, Blaine, and Camas counties. This compared to only 18 developments reviewed during the previous year. Sixteen responses to Blaine County Planning and Zoning Commission on issues such as public stream access, protection of wildlife migration corridors, riparian protection and enhancement measures, measures to reduce big game depredation potential, and guidelines regarding methods to reduce conflicts and impacts from the construction of residential homes on traditional wildlife wintering areas were common topics addressed.

Technical assistance regarding protection of fish and wildlife habitat was provided to the counties of Jerome, Twin Falls, and Gooding in preparation of updated county comprehensive plans.

Seven environmental reviews to assist local communities to apply for block grants were completed in 1995.

Mining Activity

Input was provided to Twin Falls and Blaine counties, IDL, USFS, BLM, and IDWR.

Black Pine Mine, which is jointly administered by USFS and BLM, continued to expand and reclaim land during 1995. Wildlife mitigation land parcels were identified and acquisition is currently being negotiated between Pegasus Gold Corporation and willing sellers to fulfill lost habitat units.

Three reclamation plans were reviewed and comments provided to IDL and Twin Falls County for new gravel pits.

The Biomyne Corporation continued exploration activities in the Sun Valley area during 1995. Comments were provided to the USFS on location of roads, exploration road reclamation plans, and seasonal timing of activities to minimize impacts to wildlife.

Nine new applications were submitted to IDWR for dredge mining on the South Fork Boise River. All nine were protested by IDFG and USFS because of potential impacts to bull trout and critical bull trout habitat. Subsequently, IDWR denied all nine because of impacts identified to fish and wildlife and their associated habitats.

Appendix 1. Waters sampled for fish species in 1995 by Beneficial Use Reconnaissance Program personnel.

Water	(PNRS) #	Species Present
Baker Creek	507.0	WRBT, BKT, SC
Boulder Creek	506.0	BKT, SC
Cottonwood Creek	471.0	SD, RSS, SC
Cove Creek	497.0	No Fish
Croy Creek	491.0	BKT
Dry Creek (Lower)	408.0	SD, LND, RSS
Dry Creek (Upper)	408.0	CT
Eagle Creek (Lower)	504.0	WRBT, SC, BKT
Eagle Creek (Upper)	504.0	SC, BRT
Ellisons Springs	399.0	No fish
Greenhorn Gulch Creek	495.0	WRBT, BKT, SC
Grindstone Creek	574.0	WRBT, SC
Indian Creek	493.0	BKT Little
Lake Creek	502.0	SC, WRBT, BRT
L1LJle Cottonwood Creek	451.0	WRBT, SC
Owens Creek	531.0	No fish
Pole Camp Creek	468.0	WRBT, SPD, RSS
Quigley Creek	492.0	BRT, SC
Riley Creek	385.0	WRBT, SC
Shoshone Creek (Lower)	466.0	SMB, CM, SF, CF, WRBT, RSS, SU, SC
Slaughter House Creek	490.0	BRT

WRBT =Wild Rainbow Trout *(Oncorhynchus mykiss),* CT= Cutthroat *(Salmo clarki),* BKT =Brook Trout *(Salvelinus fontinalis),* RSS=Redside Shiner *(Richardsonius balteatus), SC=Sculpin (Cottus spp.),* SD=Speckled Dace *(Rhinichthys osculus),* LND = Longnose Dace *(Rhinichthys cataractae),* SMB = Smallmouth Bass *(Micropterus dolomieui),* CM=Chiselmouth *(Acrocheilus alutaceus),* SF=Northern Squawfish *(Ptychocheilus oregonensis),* SU = Sucker *(Catostomus spp.)*

JOB PERFORMANCE REPORT

State of:	Idaho	Name:	STATEWIDE TECHNICAL ASSISTANCE
Project:	FW-7-T-2	Title:	Southeast Region Technical Assistance
Subproject:	II	Job No.:	5

ABSTRACT

The Southeast Region environmental staff biologist (ESB), with support from wildlife, fisheries, and habitat staff, provided technical assistance to public and private organizations in the form of field inspections, meeting attendance, and project document reviews. During the 1995-96 report period, most of the assistance was provided the Caribou National Forest, followed by the Idaho Department of Water Resources (IDWR) and the Bureau of Land Management (BLM).

Author:

J.R. Lukens
Environmental Staff Biologist

OBJECTIVES

To provide technical assistance to city, county, private, and state and federal entities in matters relating to fish and wildlife habitat.

METHODS

Technical assistance was provided through reviews of permit applications, project plans, and National Environmental Protection Act documents; through site inspections; and through meeting attendance.

RESULTS

The major categories for technical assistance in the Southeast Region during this report period were mining, timber sales, grazing, and water-related projects. Most of the technical assistance was provided to the Caribou National Forest, followed by the IDWR and the BLM (Table 1). Much of the technical assistance was listed in the "other" category which included private sector projects, city community grant projects, and responses to concerned citizens regarding various projects.

Committee Participation

The Southeast Region ESB participated on and cooperated with the following committees:

Bear Lake Preservation Advisory Committee
Thomas Fork State Agricultural Water Quality Program Planning
Project Steering Team
Great Salt Lake Basins National Water Quality Assessment Liaison Committee
Portneuf River Watershed Management Group
Bear River Basin Water Quality Task Force
Blackfoot River Watershed Management Group

Table 1. Summary of technical assistance provided by the Southeast Region ESB and other personnel, 1987-1996.

Agencyl	Report year 1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
FSA/NRCS/ RC&D's'	0	0	0	0		0	7	24	13	12
USACE[b]	1	1	0	2	1	0	2	6	13	18
BLM`	11	5	11	7	13	13	21	8	24	25
CNF/USFS[d]	12	18	13	18	26	22	32	53	46	55
USFWS[e]	0	0	2	1	2	1	3	0	0	1
IDL[f]	2	5	5	8	4	2	8	3	8	15
ITD[g]	1	2	3	5	0	0	2	2	6	4
IDWR[h]	--	--	--	--	--	--	--	19	27	39
FERC[i]/Hydro	--	--	--	3	2	1	0	6	14	16
P&Z[j]	--	--	--	--	0	2	6	6	15	9
SB 1284[k]	--	--	--	--	--	--	--	--	--	8
Others	16	19	18	26	26	19	24	38	33	55
Total	43	50	52	70	74	60	105	165	199	257

[a]Farm Services Administration/Natural Resource Conservation Service /Resource Conservation & Development
[b]United States Army Corps of Engineers
[c]United States Bureau of Land Management
[d]Caribou National Forest/United States Forest
[e]United States Fish and Wildlife Service
[f]Idaho Department of Lands
[g]Idaho Transportation Department
[h]Idaho Department of Water Resources
[i]Federal Energy Regulatory Commission
[j]Planning and Zoning
'Senate Bill 1284 (1995 Idaho Water Quality Legislation)

Senate Bill (SB) 1284 Implementation

Implementation of SB 1284 established Basin Advisory Groups (BAGs) for the Bear and Upper Snake rivers. No formal Watershed Advisory Groups (WAGs) have yet formed; however, the Blackfoot and Portneuf River watershed management groups are both planning to petition the BAGs for WAG recognition. The ESB will attend BAG and WAG meetings and provide technical assistance.

Bear River Hydro Relicensing

PacifiCorp operates four Bear River hydros that initiated the Federal Energy Regulatory Commission relicensing process this year. The projects include Oneida, Soda Point, and Grace/Cove (two projects that operate under one license). Current project licenses will expire on October 1, 2001. The ESB, with assistance from other Southeast Region and Natural Resources Policy Bureau staff, provided data and input to PacifiCorp regarding the First Stage Consultation document. The IDFG will further coordinate with PacifiCorp to identify specific studies needed to evaluate the effect of project operations on fish and wildlife habitat.

Phosphate Mining

The ESB conducted site inspections, reviewed plans, and drafted comments and attended meetings regarding the following phosphate mining proposals:

Central Rasmussen Ridge Mine and Reclamation Plan - Rhone Poulenc
Freeman Ridge exploration - J.R. Simplot
Manning Creek/Dairy Syncline leasing proposal
Panel B, Smoky Canyon Mine exploration - J.R. Simplot
Rasmussen Ridge lease expansion - Rhone-Poulenc
Wells Canyon exploration - J.R. Simplot
Windy Ridge and Grizzly Creek exploration - J.R. Simplot

JOB PERFORMANCE REPORT

State of: Idaho Name: STATEWIDE TECHNICAL ASSISTANCE

Project: FW-7-T-2 Title: Region 6 Technical Assistance

Subproject: II Job No.: 6

Period Covered: January 1, 1995 to December 31, 1995

ABSTRACT

During calendar year 1995, the Region 6 environmental staff biologist provided technical review and comments on more than 609 occasions. The majority of interaction was with federal and state agencies on a variety of land and water management issues having potential impact on fish and wildlife habitats. Major duties included forest management, hydropower project operations and compliance, stream alterations, wetland fills, and Henrys Fork and South Fork basin issues. Activities were coordinated with Idaho Department of Fish and Game staff.

Author:

Robert C. Martin
Environmental Staff Biologist

OBJECTIVES

To provide technical assistance to city, county, private, state, and federal entities in matters relating to fish and wildlife habitats.

METHODS

Document review, literature research, field inspection, and consultation with appropriate policy and management personnel were used to provide comments and recommendations on actions proposed by private entities, local governments, and state and federal agencies.

RESULTS

Contacts,

The Region 6 environmental staff biologist provided reviews and comments for the following entities on the listed number of occasions:

U.S. Forest Service (USFS)	160
Bureau of Land Management (BLM)	14
Corps of Engineers (COE)	40
Bureau of Reclamation (BOR)	18
Fish and Wildlife Service (FWS)	30
Federal Energy Regulatory Commission/Utilities	50
Environmental Protection Agency (EPA)	3
Natural Resources Conservation Service (NRCS)	3
Northwest Power Planning Council/Bonneville Power	5
Shoshone-Bannock Indian Tribes	2
Idaho Dept. of Water Resources (IDWR)	70
Idaho Dept. of Lands (IDL)	12
Idaho Division of Environmental Quality (IDEQ)	4
Idaho Transportation Department (ITD)	10
Idaho Dept. of Parks and Recreation (IDPR)	3

City/County Governments	38
Private developers/environmental groups	40
Media	4
Intradepartment	103
TOTAL	**609**

Summary of Selected Projects

Targhee National Forest (TNF)

During 1995, the total volume sold on the TNF was 11.2 million board feet. This is down from the 71 million board-foot average of the 1980s. We commented on several timber sales, trail construction projects, land exchanges, and about 70 grazing allotment permit reissuances.

We reviewed a preliminary landscape analysis for the Centennial Mountains. The TNF used their analysis to propose a timber sale to meet the forest's short-term timber demand. The TNF determined the proposed "aspen enhancement" project to be financially feasible by estimating benefits to farmland as a result of increased water yield from the forest after extensive vegetation removal. The area proposed for logging contains old-growth Douglas-fir forest in very valuable wildlife habitat.

The Forest Plan Revision proceeded with the completion of a preliminary draft revision and EIS. We participated in several consultations during the year with forest staff and interested members of the public. We provided comments on critical issues prior to the TNF's completion of draft documents for public review. The revision would establish motorized road and trail density maximums throughout the forest, and eliminate unregulated cross-country motorized travel from 93 percent of the forest. Greater than 90 percent of the forest would meet state of Idaho elk vulnerability objectives with the proposed motorized access plan. Although it is said that 800+ miles of roads and trails will be closed on the forest, virtually all closures will be of non-system roads and trails that are not classified as open on the forest travel plans.

Federal Energy Regulatory Commission Projects

Ashton/St. Anthony- A mitigation agreement was finalized for the St.Anthony portion of this project. Impacts to fish passage will be mitigated by a combination of installation and operation of a fish passage facility and salvage of salmonids from the Egin irrigation canal each fall.

The wildlife mitigation plan for the Ashton portion of this project was finalized after 12 years of effort. Mitigation includes a combination of riparian fencing, vegetation planting, acquisition of grazing leases around wetlands near the reservoir, maintenance of a goose pasture, and installation and maintenance of osprey, bald eagle, and Canada goose nesting platforms.

The fishery mitigation plan for the Ashton portion of the project was also finalized. The fish stocking agreement accommodates increasing recreational demand on the reservoir, and it is effective through the year 2028.

A final settlement agreement was obtained for a project-caused fish kill in 1991. The licensee was ordered to fund IDFG $10,000 to be used to improve the local fishery.

Gem State-The wildlife mitigation plan was finalized. Mitigation issues were resolved by the licensee agreeing to reconstruct and expand the on-site emergent wetland pond, expand the on-site wetland cells, and provide flood irrigation to the off-site wetland area.

The licensee purchased fish-shocking equipment and was trained to salvage salmonids that become trapped in the spillway area during frequent project maintenance events.

Fall River-An under-release avoidance plan was finalized. The licensee will install a flow monitoring station at the project instead of depending on a gage $^{1}/_{2}$ mile below the project diversion. Diversion gate management during under-release events will be changed to immediately close the gates, then ramp them open over time, rather than the previous management of ramping the gates closed over time. The licensee has improved their predictive abilities to estimate imminent ice-dam formation by correlating river and weather conditions to observed ice-dam events. The licensee is continuing to release 20+cfs buffer flows over the 200 cfs required minimum flow, to help ensure under-releases do not occur.

Pancheri-Terms and conditions for this exempt project were developed for the expansion proposed for the hydropower portion of the project, and a construction and mitigation plan (BLM right-of-way permit) was finalized for the irrigation ditch reconstruction portion of the project. Riparian vegetation will be protected at four springs, and the irrigation ditch will be lined with plastic rather than being placed in a pipeline. This will protect the open water and riparian vegetation currently available to antelope and sage grouse in this very dry area.

Island Park-A revised operation and monitoring plan for the overall project was finalized. Monitoring station points of compliance and water temperature and dissolved gases parameters were changed to reflect information gathered during the monitoring testing period.

The environmental assessment and a cooperative operation and monitoring agreement were finalized for the spillway modification project. A one-foot rubber dam installed on top of the existing spillway provided the opportunity to significantly change the temperature of water released from Island Park during the critical spring season. With the spillway modification, water could be released from the hypolimnion (72 feet deep) through the hydroelectric penstock rather than traditional release of surface water over the spillway. The differences in temperatures at these two locations, for both pre- and post-ice-out, caused concerns for potential project impacts on trout spawning, egg incubation periods, fry and adult growth rates, and overwinter juvenile survival.

The final agreement stipulates surface spill of 180 cfs of warmer surface water after ice-out, unless the project advisory committee determines that more or less surface water needs to be mixed with the colder deep water releases. A cooperative monitoring program (conducted by licensee, Henrys Fork Foundation, and IDFG, with oversight by the hydroelectric advisory committee) includes annual fish population monitoring, age and growth studies, monitoring of water temperatures and downstream mixing, monitoring of rainbow trout spawning timing and location, egg incubation and fry emergence, shoreline fry counts, study of temperature effects on giant salmonfly emergence, and other environmental studies.

The studies will be used to assess impacts of the project on aquatic biota, and to establish target water temperature objectives for specific periods of time during the late-winter/spring period.

South Fork Snake River Basin Plan

Basin Plan-We provided extensive technical assistance to the Idaho Department of Water Resources (IDWR). In addition to providing data and literature to IDWR, I participated in advisory group meetings to provide information and to discuss issues and recommend solutions.

During 1996, the outstanding resource evaluation will be conducted, and the advisory group will make recommendations for protection of the mainstem and tributaries.

Watershed Council-I participated in start-up planning and meetings to establish a watershed council for the basin. The council should be established during 1996, and likely will be available to function as a watershed advisory group to the Division of Environmental Quality.

Submitted by:

Will Reid
Fisheries Program Coordinator

John T. Heimer
Staff Fishery Biologist

Cindy Robertson
Staff Fishery Biologist

Michele Beucler
Wildlife Mitigation Specialist

Charles E. (Chip) Corsi
Environmental Staff Biologist

Gregg Servheen
Environmental Staff Biologist

Scott A. Grunder
Environmental Staff Biologist

David E. Parrish
Environmental Staff Biologist

Jim Lukens
Environmental Staff Biologist

Bob Martin
Environmental Staff Biologist

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

Cal Groen, Chief
Natural Resources Policy Bureau

Will Reid
Fisheries Program Coordinator